

- 1 1. A method comprising:
2 enabling a phase change memory to be both
3 optically and electrically accessed.
- 1 2. The method of claim 1 including forming a phase
2 change memory with a pair of parallel spaced electrodes and
3 a phase change material between said electrodes.
- 1 3. The method of claim 2 including arranging said
2 phase change material and said electrodes laterally.
- 1 4. The method of claim 3 including enabling light
2 exposure of said phase change material.
- 1 5. The method of claim 4 including enabling light
2 exposure through a thermally insulating material.
- 1 6. The method of claim 3 including enabling said
2 phase change material to be electrically accessed through
3 rows and columns.
- 1 7. The method of claim 6 including locating said
2 rows and columns to enable light access to said cells.
- 1 8. The method of claim 7 including positioning one
2 of said rows and columns below said phase change material.

1 9. The method of claim 8 including providing a via
2 coupling one of said electrodes to said underlying row or
3 column.

1 10. The method of claim 1 including using a phase
2 change memory to convert an optical signal to an electrical
3 signal.

1 11. The method of claim 1 including using a phase
2 change memory to convert an electrical signal to an optical
3 signal.

1 12. A memory comprising:
2 a light accessible phase change material; and
3 a circuit to electrically access said phase
4 change material.

1 13. The memory of claim 12 wherein said phase change
2 material is a chalcogenide.

1 14. The memory of claim 12 wherein said phase change
2 material is arranged laterally and includes a pair of
3 laterally spaced electrodes approximate to each of two
4 opposed ends of said material.

1 15. The memory of claim 14 including rows and
2 columns, said rows and columns arranged to avoid blocking
3 light access to said phase change material.

1 16. The memory of claim 15 wherein one of said rows
2 and columns is arranged beneath said phase change material.

1 17. The memory of claim 16 including a via which
2 extends from one of said electrodes to said underlying row
3 or column.

1 18. The memory of claim 12 including a substantially
2 light transmissive thermally insulating material over said
3 phase change material.

1 19. The memory of claim 18 wherein said substantially
2 light transmissive, thermally insulating material is oxide.

1 20. The memory of claim 12 including a micro-mirror
2 to optically access said phase change memory material.

1 21. The memory of claim 11 including a plurality of
2 cells each including phase change material, and an optical
3 system to individually expose one memory cell of the
4 plurality of memory cells to a laser light.

1 22. The memory of claim 12 wherein said circuit
2 includes an addressing circuit.

1 23. A system comprising:
2 a processor-based device;
3 a wireless interface coupled to said processor-
4 based device; and
5 a semiconductor memory coupled to said device,
6 said memory including a light accessible phase change
7 material and a circuit to electrically access said phase
8 change material.

1 24. The system of claim 23 wherein said phase change
2 material is a chalcogenide.

1 25. The system of claim 23 including a pair of spaced
2 electrodes, said phase change material positioned between
3 said spaced electrodes.

1 26. The system of claim 25 including a substrate,
2 said phase change material positioned over said substrate
3 such that the length of said phase change material is
4 generally parallel to said substrate.

1 27. The system of claim 26 including a first set of
2 conductors and a second set of conductors, said second set

3 of conductors being generally transverse to said first set
4 of conductors.

1 28. The system of claim 27 wherein said first and
2 second set of conductors arranged to avoid blocking light
3 access to said phase change material.

1 29. The system of claim 28 wherein one of said sets
2 of conductors is arranged beneath said phase change
3 material.

1 30. The system of claim 29 wherein a via extends from
2 one of said electrodes to an underlying conductor.

1 31. The system of claim 23 including a substantially
2 light transmissive material over said phase change
3 material.

1 32. A method comprising:
2 optically accessing a phase change memory
3 material; and
4 electrically accessing the phase change memory
5 material.

1 33. The method of claim 32 including forming a phase
2 change memory with a pair of parallel spaced electrodes and
3 a phase change material between said electrodes.

1 34. The method of claim 33 including arranging said
2 phase change material and said electrodes laterally.

1 35. The method of claim 34 including enabling light
2 exposure of said phase change material.

1 36. The method of claim 35 including enabling light
2 exposure through a thermally insulating material.